

**CLAIMS**

We claim:

1           1.    A system for optical projection of a complete  
2 image,   using a lightvalve, said system comprising:  
3           a lenticular array composed of lenticules positioned  
4 onto said lightvalve; and  
5           a filter placed about a projection lens, said filter  
6 aligned with the pixels of said lenticular array, said  
7 filter depending upon the shape of said lenticules in  
8 said lenticular array.

1           2.    A system according to claim 1   wherein said  
2 lenticules are cylindrical in shape.

1           3.    A system according to claim 2 wherein pixels of  
2 said system are caused to be rectangular in shape by the  
3 shape of said lenticules.

1           4.    A system according to claim 2 wherein said  
2 filter is composed of a first, second and third segments,  
3 said first segment carrying Blue signals, said second  
4 segment carrying Red signals and said third segment  
5 carrying Green signals, said segments aligned to match  
6 the pattern of pixels of said lenticular array.

1           5.    A system according to claim 4 wherein said  
2 first and third segment are equal in area and where said

3 second segment is larger in area than said first or third  
4 segments.

1 6. A system according to claim 1 wherein said  
2 lenticules are spherical in shape.

1 7. A system according to claim 6 wherein pixels of  
2 said system are caused to be square in shape by the shape  
3 of said lenticules.

1 8. A system according to claim 7 wherein said  
2 filter is composed of a first, second, third and fourth  
3 segments, said first segment carrying Blue signals, said  
4 second segment carrying Red signals, said third segment  
5 carrying Green signals, and said fourth segment carrying  
6 one of Red, Green or Blue signals, said segments aligned  
7 to match the pattern of pixels of said lenticular array.

1 9. A system according to claim 7 wherein said  
2 filter is composed of a first, second, third and fourth  
3 segments, said first segment carrying Blue signals, said  
4 second segment carrying Red signals, said third segment  
5 carrying Green signals, and said fourth segment carrying  
6 colorless White signals, said segments aligned to match  
7 the pattern of pixels of said lenticular array.

1 10. A system according to claim 5 further  
2 comprising:

3 a lamp which acts as initial source of light for  
4 said system;

5 a condenser placed between said lamp and said  
6 lightvalve causing light from said lamp to become  
7 spatially uniform and directed onto said lightvalve and  
8 said lenticular array, said lenticular array being one of  
9 a transmitting type or a reflecting type; and

10 a field lens placed between said lightvalve and said  
11 filter, said field lens focusing the output of said  
12 lightvalve and said lenticular array onto the appropriate  
13 region of said filter, further wherein said projection  
14 lens is placed at the output of said filter, said  
15 projection lens focusing said filtered light onto the  
16 output medium displaying said complete image.

1 11. A system for optical projection of a complete  
2 image, using a first and second lightvalves, said system  
3 comprising:

4 a lenticular array composed of lenticules built onto  
5 said first lightvalve; and

6 a filter placed about a projection lens, said filter  
7 aligned with the pixels of said lenticular array, said  
8 filter depending upon the shape of said lenticules in  
9 said lenticular array, further wherein said system  
10 functions to separate chrominance and luminance  
11 components of said complete image into separate images.

1           12. A system according to claim 11, wherein said  
2           lenticules are cylindrical in shape.

1           13. A system according to claim 12 wherein pixels  
2           of said system are caused to be rectangular in shape by  
3           the shape of said lenticules.

1           14. A system according to claim 12 wherein said  
2           filter is composed of a first, second and third segments,  
3           said first segment carrying Blue signals, said second  
4           segment carrying Red signals and said third segment  
5           carrying Green signals, said stripes aligned to match the  
6           pattern of pixels of said lenticular array.

1           15. A system according to claim 14 wherein said  
2           first and third segment are equal in area and where said  
3           second segment is larger in area than said first or third  
4           segments.

1           16. A system according to claim 11 wherein said  
2           lenticules are spherical in shape.

1           17. A system according to claim 16 wherein pixels  
2           of said system are caused to be square in shape by the  
3           shape of said lenticules.

1           18. A system according to claim 17 wherein said  
2           filter is composed of a first, second, third and fourth

3 segments, said first segment carrying Blue signals, said  
4 second segment carrying Red signals, said third segment  
5 carrying Green signals, and said fourth segment carrying  
6 one of Red, Green or Blue signals, said segments aligned  
7 to match the pattern of pixels of said lenticular array.

1 19. A system according to claim 17 wherein said  
2 filter is composed of a first, second, third and fourth  
3 segments, said first segment carrying Blue signals, said  
4 second segment carrying Red signals, said third segment  
5 carrying Green signals, and said fourth segment carrying  
6 colorless White signals, said segments aligned to match  
7 the pattern of pixels of said lenticular array.

1 20. A system for optical projection of a complete  
2 image, using a first and second lightvalves, said system  
3 comprising:

4 a lenticular array composed of lenticules built onto  
5 said first lightvalve; and

6 a filter placed about a relay lens, said filter  
7 aligned with the pixels of said lenticular array, said  
8 filter depending upon the shape of said lenticules in  
9 said lenticular array, further wherein said system

10 functions to process chrominance and luminance components  
11 of said complete image into separate images.

1           21. A system according to claim 20 wherein said  
2           lenticules are cylindrical in shape.

1           22. A system according to claim 21 wherein pixels  
2           of said system are caused to be rectangular in shape by  
3           the shape of said lenticules.

1           23. A system according to claim 21 wherein said  
2           filter is composed of a first, second and third segments,  
3           said first segment carrying Blue signals, said second  
4           segment carrying Red signals and said third segment  
5           carrying Green signals, said stripes aligned to match the  
6           pattern of pixels of said lenticular array.

1           24. A system according to claim 23 wherein said  
2           first and third segments are equal in area and where said  
3           second segment is larger in area than said first or third  
4           segments.

1           25. A system according to claim 20 wherein said  
2           lenticules are spherical in shape.

1           26. A system according to claim 25 wherein pixels  
2           of said system are caused to be square in shape by the  
3           shape of said lenticules.

1           27. A system according to claim 26 wherein said  
2           filter is composed of a first, second, third and fourth

3 segments, said first segment carrying Blue signals, said  
4 second segment carrying Red signals, said third segment  
5 carrying Green signals, and said fourth segment carrying  
6 one of Red, Green or Blue signals, said segments aligned  
7 to match the pattern of pixels of said lenticular array.

1 28. A system according to claim 26 wherein said  
2 filter is composed of a first, second, third and fourth  
3 segments, said first segment carrying Blue signals, said  
4 second segment carrying Red signals, said third segment  
5 carrying Green signals, and said fourth segment carrying  
6 colorless White signals, said segments aligned to match  
7 the pattern of pixels of said lenticular array.